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AN ERYTHEMA OF LEPRA CONTAINING GIANT-CELL-LIKE STRUCTURES, SIMULATING SOMEWHAT THE GIANT-CELLS FOUND IN TUBERCULOSIS.

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ON May 4, 1892, an American, thirty-three years of age, and unmarried, was brought to me by a fellow-practitioner. There was a reddish-brown, elevated, flattened, erythematous patch with fairly steep edges, about as large as a fifty-cent piece, over the left malar bone, which had appeared as a small pimple about two years before. It had existed for a long time as a small spot, and once had almost entirely disappeared. There was also a red, desquamating patch, about the size of a silver dollar, over the anterior surface of the lower third of the right radius. This patch the man said had appeared, in shape like a ringworm—a reddish-brown circle with a white center—about three months before. It had not the ringworm appearance when I saw it, because he had accidentally burnt it six weeks previously.

The muscles of the arm and those of the face were normal. There was no atrophy and no fibrillary twitching of the muscles. Both ulnar nerves could be felt distinct and hard as they passed over the internal condyles; they were somewhat more irritable than normal.

There was marked analgesia, but no appreciable anesthesia of the patches. I cut a good-sized piece out of the patch on the face, and he felt very little pain. He said he felt pain when he burnt the patch on the forearm six weeks before. Heat he sometimes appreciated, but cold not at all, on the spot on the face. Both heat and cold appeared to be about equally obtunded on the spot on the arm. The sense of pressure and that of locality seemed to be normal. There was no summation of pain, that peculiar symptom which is elicited by pricking the skin a great number of times, when the pain is not felt as a lot of individual twinges, but as one pain, the sum of all the pricks. Eyesight, smell, taste and hearing were good. The patellar tendon-reflexes were normal, and there was no foot-clonus.

In 1883 he had gone to the Sandwich Islands, and remained one year. He then came back to the United States for a year and a half, after which he returned to the Islands for five years.

He had a weakness for liquor, and indulgence was accompanied by venereal abandonment. In this way he had frequently acquired venereal sores, but gave no further history of syphilis.

Although there could be no reasonable doubt that he was suffering from leprosy, yet, on account of the history, and also because some "bald patches" were found on the dorsum of the tongue, it was determined to try the effect of antisyphilitic medication. Both protiodid of mercury, a grain a day, and potassium iodid, sixty grains a day, were tried without effect.

The juice (smear-preparations), as well as sections of the piece cut from the patch on the face, were examined carefully for lepra-bacilli, but fruitlessly. This is exactly what was to have been expected, as lepra-bacilli are exceedingly difficult to demonstrate in such lesions. Dr. Armauer Hansen told me in a letter anent this case, that he himself had often searched vainly for them, although

they had been demonstrated in such patches about one year ago (in 1891) by Dr. Looft, of Bergen, Norway.

But the chief interest in the sections lay in the presence of structures which were wonderfully like, yet in many respects unlike, giant-cells, for it has been asserted on good authority that giant-cells do not occur in the lesions of lepra. They were like giant-cells in that they consisted of a hyaline center surrounded by nuclei, but in many respects they differed from true giant-cells—they were too circular, and they were surrounded by one row, usually complete, of round nuclei, while the nuclei of Langhans' giant-cells are usually oval, and frequently heaped up more numerously at one end of the cell than at the other. They could hardly have been derived from the confluence of the epithelial cells lining the sweat-duct, for, as Hansen remarked, they frequently lay close up under the papillary layer of the skin. Dr. Hansen suggested, and I think the suggestion is undoubtedly correct, that they were capillary blood-vessels, the nuclei of which were undergoing proliferation.[1] These capillaries were not filled with blood, but with a hyaline, possibly gelatinous substance, which gave the appearance of the center of a giant-cell. Many other widely dilated capillaries were found, with nuclei projecting into the lumen, but without the hyaline filling. There was a considerable amount of round-celled inflammatory infiltration in the connective tissue.[2]

[1] Dilated bloodvessels with proliferating endothelium have frequently given rise to errors in diagnosis; for instance, Von Winiwarter, in speaking of plexiform angiomata, says that "the endothelial cells are stout, and the nuclei project decidedly into the lumen of the vessel. The individual endothelial cells are sometimes placed so closely together that they simulate cylinder-celled epithelium, and one may be in doubt whether the structure before one is a bloodvessel or a sweat-duct." Die chirurgischen Krankenheiten der Haut und des Zellgewebes. Von Dr. A. von Winiwarter. S. 529.

[2] Others have also been puzzled by these structures. For instance, Danielssen, in an article ("Zur Therapie der Lepra,"

The further history of the case, with the treatment, is also interesting.

After the failure of the antisyphilitic treatment, the patient was given sodium salicylate, about twenty grains a day for six weeks, when salol was prescribed in doses running from forty to sixty grains a day, and continued for several weeks. Then the salol was reduced to thirty grains a day, and has been continued ever since, with intermissions of variable length, during which sodium salicylate was prescribed. Sixteen weeks after first coming under my notice a hard, tense cord, about as thick as ordinary twine, was found extending from the patch on the lower outer side of the right forearm upward and inward toward the middle of the bend of the elbow, which it almost reached. This cord, when twanged, gave a "funny-bone" sensation in the radial half of the dorsum of the right hand. There was one node on this cord situated about midway between the patch in the skin and the bend of the elbow. This cord afterward became much more nodular.[1]

Ergänzungsheft zum Archiv für Dermatologie und Syphilis, February, 1893, No. 1), says: "Dr. Abraham sent some slides to the laboratory of the Lungegaards Hospital, and both Armauer Hansen and Dr. Looft agreed that the supposed myeloplaques found in them were transverse sections of bloodvessels, with nuclear proliferation of the intima. Dr. Looft showed in similar slides, by serial sections, that these structures were transverse and oblique cuts through bloodvessels. Neither Hansen nor Looft, although they have examined thousands of slides, have ever been able to find myeloplaques in leprous tissue."

[1] It might be thought that this knotted cord was not a nerve but a lymphatic, because of its course upward and inward toward the median line, but a superficial nerve could easily take this course, as the cutaneous branch of the radial pierces the superficial fascia far over toward the median line in many cases. But it might be objected that this structure was grossly implicated, far too grossly, if a nerve, to give so few indications of interference with its functions. Herein lies one of the peculiarities of leprous

Toward the end of September, 1893, a little over sixteen months after first seeing the patient, the upper part of the patch on the arm had a segment of a circle of brown pigment in it; the lower part of the patch was devoid of pigment, being whiter than the surrounding skin. I ran a needle through the skin without causing pain, and touch was hardly perceptible in the middle of the altered area. The lesion on the side of the face had vanished, and the appearance and sensations of the skin of its site were normal, but it grew redder than the rest of the face when the patient became heated.

The question of cutting down upon and extirpating the diseased nerve was now mooted, but decided against, as the manifestations on the face and in the ulnar nerves had shown that the affection was not localized.

At present the only evidence of active disease is this knotted nerve in the forearm and the slightly enlarged ulnar nerves, and these lesions do not seem to be progressive; it even seems to me that the nerve running up from the anesthetic patch is somewhat smaller than it used to be.

Can we say with any degree of positiveness that the disease is going on to a cure, and if so, what part had the therapeutics to do with the improvement? We can neither say that the disease is improving, nor that the medication is having any influence over it. It is not an uncommon thing for leprosy to attack a nerve, and then remain apparently quiescent for many years. It seems to me, however, from the comparatively small experience I have had in this direction that both salol and sodium salicylate have some beneficial effect on the

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neuritis, as a nerve attacked by leprosy may display very decided evidence of disease anatomically, and almost none functionally, as set forth in a case reported by Arning and Nonne, "Weiterer Beitrag zur Klinik und Anatomie der Neuritis leprosa," von Dr. Ed. Arning und Dr. M. Nonne, *Virchow's Archiv*, Band cxxxiv, S. 319.

course of leprosy. Leprosy, like tuberculosis, however, is subject to striking and unexpected improvement without the use of any drug whatever, or simply from the hopefulness of trying a treatment. We all know what an amount of misery many of these new treatments have caused, especially in tuberculosis. The lepers, being almost without exception poor, have escaped receiving so much attention. The contributors to this misery are in some instances culpable and in others innocent. When a medical man is not of a judicial and critical temperament he is likely to honestly attribute too much to the treatment, and the golden rewards he reaps from his rose-colored reports of cases come to him guilelessly. But there are others whose wings are not those of the angel of healing, but of an obscene bird, and whose reports to medical journals are for the distinct purpose of filling the office with patients.